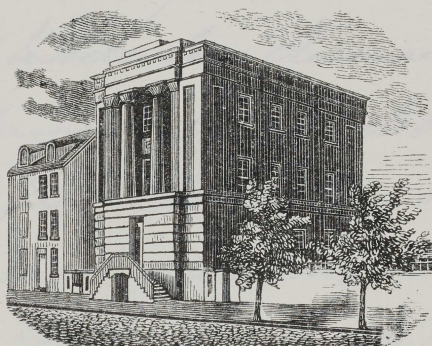


AN ESSAY ON

# *Phthisis Pulmonalis*

RESPECTFULLY SUBMITTED TO THE FACULTY OF THE



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pv 30

## Phthisis Pulmonalis.

The term phthisis is used to denote that form of tuberculous disease in which the lungs are principally affected. In these organs it is first developed, and here are manifested the most interesting and important of its symptoms. It prevails throughout our land, but to a much greater extent in the northern than in the southern latitudes. It is estimated that about one sixth of the deaths occurring north of the tropics is caused by this dreaded disease. Those who are constitutionally predisposed to it are said to possess the tuberculous or scrofulous diathesis; that is a predisposition to deposit a peculiar substance which



from the form it assumes in many tissues is called tubercle. This diathesis is thought to be indicated by certain physical peculiarities, as a clear easy complexion, soft delicate skin, large blue eyes with long lashes, thick lips especially the upper one, narrow chest and in childhood a sprightly disposition and precocious intellect. The nature of this peculiar deposit which is conveyed by the blood, and which may occur in any part of the system where the blood circulates, and the development of which is attended with such fatal results has not yet been decided. When first deposited it is gray semitransparent and hard, soon becoming yellow opaque and soft. It is thought to be sometimes deposited in the latter form, which is its crude state. These deposits may

take place in small isolated bodies or in irregular infiltrated masses. The small isolated bodies are called military tubercles and vary in size from a millet seed to a pea, and are sometimes even larger. Tubercles when deposited may advance to their crude state and remain quiescent until some accidental or unknown circumstance rouse them into action. When tubercular matter is deposited in the gray semitransparent form, a yellow spot soon makes its appearance near the centre of the deposit which continues to extend until the whole becomes yellow opaque and soft. When the tubercular deposits have matured inflammation and ulceration set in, a passage is established between the tubercle and bronchus, one or



more of which communicate with a tubercle, the contents of the tubercle are discharged, leaving a cavity technically called a vomica. These vomicae are lined by a false membrane which secretes a pus-like substance which continues to be discharged for sometime. This membrane is formed by fibrinous exudation and is continuous with the mucous membrane of the bronchia. Sometimes these cavities or vomicae coalesce forming one immense cavern not unfrequently comprising the whole upper lobe of a lung. These cavities are seldom or never found in the lower portions of the lungs; the isolated tubercles however are found scattered in all parts of the organ. Of the two the left lung seems to be the most obnox-

ious to tubercular deposits. The origin of tubercles has been and is still a subject of great interest. Some pathologists maintain that they are a product of inflammation; but the argument urged against inflammation as the producing cause of tubercles is that those parts of the lungs the most prone to inflammatory attacks are seldom the seat of, and have the fewest tubercles, and that those portions of the lungs in which deposits are most frequently found are rarely affected by inflammation. Inflammation sometimes precedes and is often the result of the development of tubercles, but that they are the result of an inflammatory process is now generally disbelieved by the profession. Another interesting subject and one of much controversy, is the mode by



which softening is produced in tubercles.  
 Some contend that an inflammatory con-  
 dition is excited by infiltrated purulent  
 or serous fluid secreted by the inves-  
 ting tissue of the tubercles, but others  
 equally eminent as authority among  
 whom may be mentioned Greenue  
 and Louis are opposed to this opinion.  
 We are led to suppose from certain obser-  
 vable facts that this change in tuber-  
 cular deposits is owing to the peculiar  
 nature of the substance. Sometimes  
 the development of tubercles is arrested  
 and nature establishes a process by  
 which the animal portion of the tuber-  
 cle is absorbed, the earthy portion  
 remaining in the form of a chalky  
 concretion which is comparatively  
 harmless. Another process by which tuber-

-les are sometimes healed consists in  
 the contraction of the walls of a cavity  
 after its contents have been evacuated  
 a cicatrix remaining denoting where on-  
 -ce had been a tubercle. So insidious is  
 this formidable disease in its attack that  
 the citadel is stormed before the unwary  
 victim is alarmed. It generally commen-  
 -ces with a dry hacking cough so slight  
 at first as to cause no uneasiness, but grad-  
 -ually increasing in severity, and soon at-  
 -tended with a mucous expectoration, which  
 at first is transparent, but soon becoming  
 yellowish and opaque. The cough which is  
 one of the most prominent symptoms,  
 is supposed to be owing in the early stage  
 to bronchial irritation produced by the tu-  
 -bercles acting as foreign bodies in the lungs.  
 As the disease progresses the cough becomes



very troublesome preventing the unfortunate patient from obtaining any refreshing rest. This increase of the Cough is attributed to the tubercles having arrived at that period when their contents seek to be discharged, and also to the bronchial inflammation caused by the irritating matters coming in contact with the bronchial membrane. At this stage the character of the expectoration is materially altered, the sputa having a distinct globular form of a greenish yellow colour, thick semifluid consistency, and is often streaked with yellow indicating liquefied tuberculous matter. When these distinct globular sputa are discharged into water they flatten but retain their distinct form and float or sink as they are more or less mixed with mucus. The distinct sputa

are seldom observed in any other disease of the chest, and sometimes they are wanting in phthisis, the expectoration being more like that noticed in the purulent stage of Chronic Bronchitis, which is more apt to be the case if there are large vomices in the lungs. The quantity expectorated varies in different cases, in some being quite copious and in others scarcely noticeable. Sometimes the discharge of pus suddenly ceases, which is attributed to the cavity having taken on a healthy action; But other tubercles soon mature and the discharge is again renewed. In the advanced period of the disease, the pus frequently presents a rusty or brownish appearance, and the cough becomes deep and hollow, which is one of the fatal signs. The cough and expec-



toration not unfrequently cease a few days  
 previous to dissolution. Dyspnoea is a symp-  
 tom most usually present in the later sta-  
 ges of phthisis, but which however is sel-  
 dom troublesome unless there be compli-  
 cation with some other disease of the  
 chest, when it may cause extreme suffer-  
 ing. Cases are mentioned where the patients  
 were obliged to maintain the sitting posture  
 for days and even weeks before death. That  
 Dyspnoea is not more frequently a prom-  
 inent symptom is attributable to the  
 fact, that the amount of blood becomes  
 proportioned to the diminished capac-  
 ity of the lungs. Hemorrhage may  
 occur at any period of the disease,  
 but is usually more frequent in the first  
 than at any subsequent stage. If copious  
 haemoptysis occur at an advanced period

of the disease it is most probably owing  
 to some large vessel having been <sup>spontaneously</sup>  
 opened by ulceration. The symptom caus-  
 ing the patient more discomfort than any  
 other, is the night sweats which are often  
 so profuse that the sheets in which the  
 patient has slept may be wrung. The ex-  
 haustion from these sweats is extreme, caus-  
 ing the poor patient to dread the thoughts  
 of sleep. Watson mentions a case of a poor fel-  
 low who was so troubled by nocturnal per-  
 spiration that he slept for several suc-  
 cessive nights in a sitting posture in hope  
 of obtaining relief, and on those nights he  
 had no perspiration. These sweats are tho-  
 ught to be owing to a debilitated con-  
 dition of the capillaries which allow the  
 watery portion of the blood to escape readily  
 and that they occur during sleep because the



vital forces are then the most depressed.  
 Next to the cough a frequent pulse is found  
 to be the most constant <sup>symptom</sup> in phthisis. Slight  
 exercise causes great acceleration, and fre-  
 quently it will rise as high as one hun-  
 dred and twenty or thirty in a minute.  
 Sometimes it is not increased beyond its  
 normal standard during the whole  
 course of the disease. Emaciation and  
 debility are prominent symptoms, the  
 appetite may be good but day by day  
 there is a wasting away indicating all too  
 plainly that there is a cause undermin-  
 ing the system which the vital powers  
 cannot resist. The debility is not usually  
 proportionate to the loss of flesh, the patient  
 not infrequently retaining sufficient streng-  
 th to walk about even to the day of death.  
 Gastric symptoms are frequent. <sup>There is</sup>

often pain in the epigastrium which is most  
 generally attended with nausea and vomiting.  
 The vomitings are usually mucous in their char-  
 -acter; rarely bilious. Diarrhoea is another  
 common symptom and one exceedingly  
 -ly harassing to the patient. It generally ap-  
 -pears after the disease is somewhat ad-  
 -vanced. It was formerly believed that the diar-  
 -rhoea and perspiration bore an inverse ratio  
 to each other; but according to Louis and  
 others it seems to have been an erroneous  
 opinion. It has been observed that when chron-  
 -ic gastritis and diarrhoea are present in  
 the early stages of the disease that its course  
 is much more rapid. In phthisis the male  
 sexual organs are but little affected;  
 in the female however, these organs are com-  
 -monly affected. Suppression of the men-  
 -ses is of frequent occurrence, and is thought



to materially increase the danger. Many suppose that pregnancy and lactation exert a favorable influence over the disease; symptoms that were alarming have been known to disappear frequently during gestation, and young married women are known to have been free from symptoms indicating the disease for many years of child bearing and nursing who previously had all the signs of confirmed phthisis. In the commencement of the disease the physical signs are somewhat doubtful. If percussion be made upon or under the clavicle a slight dullness may be perceived, and it is quite a significant sign if a greater dullness is perceived upon one side than upon the other, particularly if it is greater upon the left side. The first auscultatory sign noticed

is feebleness of the respiratory murmur just below the clavicle. As Consolidation of the lung or lungs becomes more complete the vesicular breathing gives place to bronchial respiration and bronchophony; the expiratory sound is prolonged which is considered as a very characteristic sign of this stage of tuberculous deposition, and sometimes the inspiration is very irregular being wavy or jerking. As the Disease progresses the physical signs become more prominent, the mucous and subcrepitant rales, and sometimes the sonorous and sibilant rales are heard in the same situation, percussion becomes more dull and the vibrations caused by the cough and voice become perceptible to the hand. When a vomica is forming <sup>in</sup> the lung its progress can be followed with considerable accuracy.



When a vomica has opened into the bron-  
 chi percussion is still dull, the vibra-  
 tory motion produced by coughing and  
 speaking continues, but in addition  
 to these other symptoms now present  
 themselves. <sup>the</sup> entrance and exit  
 of air produces a sound said to be  
 well expressed by the word gurgling.  
 Laennec calls it gorgouillement. <sup>the</sup> This  
 sound is caused by the passage of air  
 through a liquid. When the cavities be-  
 come empty a different sound is heard  
 denominated cavernous respiration;  
 if the cavity ~~be~~ large it is a hollow  
 sound, but the creaking sound pro-  
 duced in the little cavities also comes  
 under the head of cavernous respiration.  
 When the walls of the large cavities be-  
 come firm the voice and respira-

tion assume what is called an ampho-  
 nic resonance, a sound which can be  
 easily imitated by blowing into a decan-  
 ter with the mouth a short distance  
 from the neck. The sound called  
 metallic tinkling is also heard. These  
 signs are said to be unfailing indi-  
 cations of cavities. The duration of the  
 disease varies; it may be very rapid  
 in its course, terminating in a few  
 months or even two or three weeks.  
 When thus rapid it is called acute  
 phthisis; in common parlance quick  
 or galloping consumption. More  
 often it lingers along for one or more  
 years. The causes are predisposing  
 and exciting. Among the former  
 an inherited predisposition is con-  
 sidered the most influential. The



exciting causes are anything that irri-  
 tates or inflames the lungs. Febrile action  
 is an efficient exciting cause; also  
 continued morbid evacuations, the heal-  
 ing of old ulcers, resolutions of external  
 scrofulous tumours, cessation of the men-  
 ses and Childbearing. About the treat-  
 ment little need be said. Is consump-  
 tion curable? is a question which has  
 been asked times innumerable. That  
 persons suffering with the disease do  
 occasionally recover is known to be  
 true; but that treatment has anything  
 to do with these recoveries no one  
 can positively <sup>assert</sup>. No doubt by proper  
 hygienic measures and safe remedies  
 the life of the patient may be prolonged  
 perhaps for years.

